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10/560,234	04/20/2006	Jari Peltonen	0696-0225PUS1	1475
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EXAMINER ARNOLD, ERNST V				
ART UNIT		PAPER NUMBER		
1616				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/560,234

Applicant(s)

PELTONEN ET AL.

Examiner

ERNST V. ARNOLD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2, 4-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/CDC)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Claims 12-15 are new. Claim 3 has been cancelled. Claims 1, 2 and 4-15 are pending and under examination.

Applicant's amendment has necessitated a new ground of rejection. Accordingly, this action is FINAL.

Comment: Applicant states in their remarks that an IDS was filed with the CA abstract for PL 146138. However, the Examiner did not find this IDS included in the submission.

Withdrawn rejections:

Applicant's amendments and arguments filed 5/23/08 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below is herein withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2 and 4-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 introduces new matter as claim 1

recites: "at least one plant nutrient in the amount of 0.1 – 70% by weight relative to seed weight." There is no support in the specification for this range. The limitation of "at least one plant nutrient in the amount of 0.1 – 70% by weight relative to seed weight" was not described in the specification as filed, and person skilled in the art would not recognize in the applicant's disclosure a description of the invention as presently claimed. The specification discloses the range of 0.1 – 10% by weight of a nutrient salt based on seed weight (page 7, lines 2-4) and 0 - 70% by weight of a nutrient salt in the coating but does not describe at least one plant nutrient in the amount of 0.1 – 70% by weight relative to seed weight. There is no guidance in the specification to select at least one plant nutrient in the amount of 0.1 – 70% by weight relative to seed weight. Therefore, it is the Examiner's position that the disclosure does not reasonably convey that the inventor had possession of the subject matter of the amendment at the time of filing of the instant application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 13-15 are directed to a lower limit of nutrient salt of 0%. The specification states on page 6, lines 18-19: "The plant nutrient component may be a so called main nutrient salt...". Applicant ties the plant nutrient of

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claim 1 to nutrient salts. Claims 13-15 are then unclear because the nutrient salt does not have to be present but claim 1 positively recites the presence of the plant nutrient. Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2 and 4-15 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean (US 6,444,614).

Applicant claims a coated seed with IDS or EDDS and methods of making the coated seed.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Dean teaches compositions and methods related to plant and plant precursor compositions comprising the aspartic acid derivatives IDS and EDDS (See abstract, examples I-III; figures 1-25 and claims 1-29, for example). Dean teaches in claims 1 and 8 (examiner added emphasis):

What is claimed is:

1. A fertilizer-free and Group IIA or higher Group metal cation-free composition of matter consisting essentially of water and a plant precursor or plant growth stimulating or regulating concentration of a mixture of (a) IDS and/or one or more of its ammonium salts, alkali metal salts, ammonium-alkali metal salts or optical isomers thereof; (b) EDDS and/or one or more of its ammonium salts, alkali metal salts, ammonium-alkali metal salts or optical isomers thereof; and, optionally, 1 H-indole-3-butyric acid, with the weight ratio of (a):(b) being from about 1:20 up to about 20:1.

8. The composition of claim 1 intimately admixed with at least one adjuvant selected from the group consisting of:

- (a) carriers;
- (b) surfactants;
- (c) carbon skeleton energy adjuvants;
- (d) vitamin/co-factor adjuvants;
- (e) gums;
- (f) anti-microbial agents;
- (g) buffers;
- (h) protective colloids; and
- (i) viscosity modifiers.

It is the Examiner's position that "plant precursor" reads on seed and such a seed is intrinsically coated by the aqueous composition.

Dean also teaches in claim 29:

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29. A process for stimulating or regulating, substantially in the absence of any fertilizer or Periodic Table Group IIa or higher group metal cations or chelated metals, the growth of a living, growing plant precursor which is a germinating seed or plant having a degree of maturity of from about >0%, the seedling stage, up to about <100%, the late maturity stage, of full growth consisting of the steps of:

- (a) formulating an aqueous plant precursor or plant growth-regulating or stimulating solution consisting essentially of water, substantially free of any fertilizer or any Periodic Table Group IIa or higher Group metal cations or chelated metals; at least one substantially pure nitrogen-containing organic compound selected from the group consisting of IDS, EDDS, ammonium salts thereof, alkali metal salts thereof, ammonium-alkali metal salts thereof and optical isomers thereof; and, optionally, 1H-indole-3-butyric acid;
- (b) providing an adjuvant for said formulated aqueous solution selected from the group consisting of:
 - i. carriers;
 - ii. surfactants;
 - iii. carbon skeleton energy adjuvants;
 - iv. vitamin/co-factor adjuvants;
 - v. gums;
 - vi. anti-microbial agents;
 - vii. buffers;
 - viii. protective colloids; and
 - ix. viscosity modifiers
- (c) intimately admixing said adjuvant with said formulated aqueous solution in order to form an adjuvant-containing formulated aqueous solution; and
- (d) applying, in the absence of fertilizer or Periodic Table Group IIa or higher Group metal cations or chelated metals, said adjuvant-containing formulated aqueous solution to said plant precursor or to said plant or to the effective proximity of said plant precursor or said plant, over a period of time and rate, and in a concentration and quantity, such that the plant precursor growth or plant growth is stimulated or regulated.

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It is intrinsic in the method of Dean to coat the seeds with the solution and it is intrinsic to do the coating with some device for that purpose (see figures 2-6 and column 8, lines 1-54).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

1. The difference between the instant application and Dean is that Dean does not expressly teach the weight percentages of the components with respect to the weight of the seed (see instant claims 3-7 and 9).

2. The difference between the instant application and Dean is that Dean does not expressly teach a composition or method with characterized in that the coating comprises 0.1-2% by weight of a trace element relative to seed weight.

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

1. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make the coated seed of Dean with the instantly claimed percentages of components with respect to the weight of the seed and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because it would merely be following the guidelines set forth by Dean. It is merely routine optimization of the composition taught by Dean.

2. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make the coated seed of Dean with the instantly claimed percentage a trace element with respect to the weight of the seed and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because it Dean teaches adding thiamine HCl which would be a source of the trace element chlorine (see instant application page 2, line 11). It is then merely routine optimization of the amount of the hydrochloride salt to be added to the aqueous coating mixture.

From recent case law: "the results of ordinary innovation are not the subject of exclusive rights under the patent laws." (KSR INTERNATIONAL CO. v. TELEFLEX INC. ET AL. 550 U. S. ____ (2007) page 24).

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976).

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to arguments:

Applicant argues 7 differences between the cited art, US 6444614 hereinafter '614, and the instant application. The Examiner will address each point.

1. Applicant asserts that the instant invention is directed to dormant seeds whereas '614 is directed to maturing seeds or plants. However, the instant claim language only states a coated plant seed and the cited art teaches a coated plant seed.

2. Applicant asserts that the cation concentration is too low in '614 for it to function as a nutrient. This is a mere assertion without any proof.

3. Applicant asserts that the present invention has a substantial amount of solid fertilizer present in powder form whereas '614 teaches a solution applied to the seed material. The instant claim language of claim 1 is not drawn to powders and the dependent claims have water present.

4. Applicant asserts that the fixing agent is added to bind the desired amount of trace element/nutrient salts on the seeds whereas '614 teaches addition of the fixing agents is to stimulate or regulate growth. A chemical entity and its properties are inseparable so while '614 may teach that the fixing agent stimulates or regulates growth it would also bind the desired amount of trace element/nutrient salts on the seeds.

5. Applicant asserts that the amount of the trace element/nutrient salts to be coated determine the amount which is what '614 does by determining what amount is needed to provide a stimulating effect or regulating effect.

6. Applicant asserts that the instant range of $>0.3\%$ for the IDS or EDDS whereas the '614 patent teaches <0.03 wt: to <0.3 wt%. However, on page 10 of the remarks (near the bottom of the page), Applicant clearly states that '614 teaches "the highest dosage of IDS or EDDS is 4% of seed weight" which is $>0.3\%$ of the instant invention.

7. This point seems to summarize the prior points and is therefore covered above.

Applicant's arguments are not persuasive and the rejection is maintained.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F (6:15 am-3:45 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ernst Arnold
Examiner AU 1616

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616